

ABSTRACT OF THE DISCLOSURE

A main memory simulation system includes storage files, a cache buffer, and an interface. The storage files includes both a fast look-up table and a slow look-up table. The fast look-up table is operable to directly obtain a page address that has been allocated to a main memory address while the slow look-up table is operable to first determine if a page address has been allocated to a main memory address and then to obtain the allocated page address. The interface operates to receive a request for transfer of main memory, in the form of a main memory address, from a storage file to the buffer of the cache. The interface responds by performing a page transfer between the storage file and buffer according to the page address that has been allocated to the requested main memory address, as found in the fast or slow look-up table.